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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/223,046	12/30/1998	TIMOTHY J. VAN HOOK	0056.10US.	2296

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EXAMINER

DONAGHUE, LARRY D

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 03/15/2002

39

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 09/10/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 41-78 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 41-46, 49-51, 54-63, 69-70, 73-78 is/are rejected.
- ☒ Claim(s) 47-48, 52-53, 67-68, 71-72 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
 - ☐ received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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1. Claims 41-78 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 41,42,49-51, 54-56, 60,62,63,69,70 and 73-75 are rejected under 35 U.S.C. 102(e) as being anticipated by Nuygen (6,058,465).

Nuygen was cited by applicant on paper no. 19.

Nuygen taught the invention (claims 41 and 42) as claimed including a method for loading a first vector of N-bit elements and a second vector of N-bit elements, executing an arithmetic instruction for at least a pair of the N-bit elements; writing the results to an M-bit element of the accumulator; transforming the resulting element to N-bits and writing to a third register (see abstract, col. 185-col.186, first paragraph of section titled Description., figure 6A).

As to claim 55, Nuygen taught that N is equal to 8 or 16 (abstract).

As to claim 56, Nuygen taught that N-bit element are integers (abstract).

As to claim 51, Nuygen taught the arithmetic instruction was one of addition, multiplication or subtraction (col. 185-col.186, Multiply and Accumulate Low).

As to claim 54, Nuygen taught adding an element previously stored in said accumulator to said resulting element (col. 186-187).

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As to claim 60, Nuygen taught the register are floating point registers (610).

As to claims 49-50, Nuygen taught the operands are formatted as specified by the instruction (col. 186-187, see section titled mode)

As to claims 62,63,69, 70 and 73-75, fail to teach or define above or beyond claims 41,42,49-51, and 54-56; and are rejected for the reasons set forth, supra.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 43-46,57-59, 61, 64-66 and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuygen (6,058,465) as applied to claims 41,42,49-51, 54-56, 62,63,69, and 73-75 above, and further in view of official notice.

The exact size of the individual register and accumulator are presumed to be within the skill of the art as applicant has failed to supply any detailed enablement, to allow one of skill in the art to make and or use the invention if they were not.

As to the ratio of claims 44, 45, 58 and 64, 65,77.

It would have been obvious to one of ordinary skill in the art to implement the accumulator in a integer multiply of the register size to allow for multiply precision thereby increasing the accuracy of the operation.

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As to claim 43, sign extension is conventional in the art . It would have been obvious to one of ordinary skill in the art to implement sign extension to give the well known advantage for arithmetic operation of operands of different sizes.

6. Claims 47-48,52-53, 67-68 and 71-72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to define these further claimed elements in response to an arithmetic operation.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. Donaghue whose telephone number is (703) 305-9675. The examiner can normally be reached on M-F from 8:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An , can be reached on (703) 305-9678. The fax phone number is (703) 306-5404 .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

LARRY D. DONAGHUE
PRIMARY EXAMINER

